

Claims

1. (Currently amended) An information updating method for vehicle-mounted control units, said method comprising:

when an updating event occurs, an information management base station transmitting a query to all vehicles under its management regarding whether or not a vehicle-mounted control unit that needs to be updated by the information management base station unit is present thereon;

said information management base station selecting vehicles to be updated based on the replies from the individual vehicles; and

said information management base station updating only the selected vehicles by updated contents divided into packets being transmitted to respective vehicle-mounted control units.

2. (Currently amended) An information updating method for vehicle-mounted control units, comprising:

an information management base station unit transmitting information relating to an information update via wireless communication;

receiving the transmitted information on a vehicle;

said vehicle determining whether or not the information update is necessary for the vehicle, based on the information received by the vehicle;

said vehicle transmitting the determination result from the vehicle to the information management base station unit;

said information management base station unit transmitting ~~the~~ update information divided into a packet to said vehicle via wireless communication only if the information update is necessary for the vehicle; and

reprogramming the vehicle-mounted control unit based on the transmitted update information.

3. (Currently amended) An update information communication system comprising:
an information management base station unit; and
a vehicle that can bidirectionally and wirelessly communicate with said information management base station; wherein,

when an updating event occurs, the information management base station unit transmits a query to all the vehicles under its management regarding the presence or absence of vehicle-mounted control units that need to be updated;

said information management base station selects vehicles to be updated based on replies from the individual vehicles; and

said information management base station updates only those vehicles that need to be updated, by updated contents divided into packets being transmitted to respective vehicle-mounted control units via wireless communication.

4. (Currently amended) An update information communication system comprising:
an information management base station unit;
a vehicle having a vehicle mounted control unit; and
a bidirectional wireless communication link between said information management base station unit and the vehicle;

wherein:

information relating to an information update is transmitted from the information management base station via wireless communication, and is received by the vehicle;

whether or not an information update is necessary for the vehicle is determined at the vehicle end based on the received information;

the determination result is transmitted from the vehicle to the information management base station unit;

the update information is transmitted from the information management base station unit to the vehicle, wherein the update information is transmitted in a packet to the vehicle-mounted control unit via wireless communication only if the information update is necessary for the vehicle; and

information of the vehicle-mounted control unit is rewritten.

5. (Previously presented) The update information communication system according to claim 4, wherein the information for the reprogramming comprises at least one of programs and control constants for the vehicle-mounted control units.

6. (Original) The update information communication system according to claim 4, wherein the information transmitted from the information management base station unit to the vehicle includes management information concerning the vehicle-mounted control unit.

7. (Previously presented) The update information communication system according to claim 4, wherein information for reprogramming programs and data in the vehicle-mounted control unit is transmitted to the vehicle only when it is in an update-allowed state.

8. (Previously presented) The update information communication system according to claim 7, wherein said vehicle is in an update-allowed state only when it is parked and not in operation.

9. (Previously presented) The update information communication system according to claim 4, wherein:

the information management base station unit comprises a database in which update information and vehicle information for a plurality of types of vehicles are stored; and

the information management base station unit selects specific update information from the database based on the vehicle information.

10. (Currently amended) An information management base station unit capable of bidirectionally communicating with a vehicle wirelessly, wherein, when an updating event occurs, the information management base station unit transmits a query to all the vehicles under its management regarding whether they have on board a vehicle-mounted control unit that needs to be updated, selects the vehicles to be updated based on replies from individual vehicles, and carries out an update on only those vehicles that have control units that need to be updated, by updated contents divided into packets being transmitted to respective vehicle-mounted control units via wireless communication.

11. (Currently amended) A vehicle-mounted control unit capable of bidirectionally communicating wirelessly with an information management base station, wherein in response to an update inquiry from the information management base station unit, the vehicle-mounted

control unit determines whether or not it needs to be updated, transmits a determination result to the information management base station unit, and carries out an update if it receives update information transmitted from the information management base station unit, wherein the update information is transmitted in a packet to the vehicle-mounted control unit.

12. (Previously presented) The method according to claim 1, wherein:
each vehicle mounted control unit determines whether the vehicle is in an update-allowed state;
said replies include information regarding an outcome of said determination; and
each vehicle is updated only when it is in an update-allowed state.

13. (Previously presented) The method according to claim 12, wherein said update-allowed state comprises a state in which the vehicle is parked and not in operation.

14. (Previously presented) The method according to claim 2, wherein:
said vehicle further determines whether it is in an update-allowed state; and
said information management base station transmits said update information only when the vehicle is in an update-allowed state.

15. (Previously presented) The method according to claim 14, wherein said update-allowed state comprises a state in which the vehicle is parked and not in operation.

16. (Previously presented) The method according to claim 1, wherein said query is transmitted by said information management base station, simultaneously to all vehicles under its management, via a broadcasting system.

17. (Previously presented) The method according to claim 3, wherein said query is transmitted by said information management base station, simultaneously to all vehicles under its management, via a broadcasting system.

18. (Previously presented) The method according to claim 10, wherein said query is transmitted by said information management base station, simultaneously to all vehicles under its management, via a broadcasting system.